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ABSTRACT

Class schedules of 458 handicapped students attending 11 comprehensive high schools in eight school districts were reviewed to examine patterns of enrollment of handicapped students at the secondary level. Academic, nonacademic, vocational, and extracurricular involvement were noted, as well as degree of integration experience by students. Among results were that low numbers of handicapped students were enrolled in high schools; handicapped students participated in an array of programs; there was a high degree of integration in nonacademic classes; there was a tendency toward nonintegrated academic and vocational services; 16% of the handicapped students had no classes of any sort with nonhandicapped peers; and special education teacher certification requirements and the nature of work experience programs raised questions about the comparability of courses for handicapped students. (Author)

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VERIFICATION OF PROCEDURES TO SERVE HANDICAPPED STUDENTS

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ABSTRACT

Class schedules of handicapped students attending comprehensive high schools in 8 school districts were reviewed to gain an understanding of the patterns of enrollment of handicapped students at the secondary level. Academic, nonacademic, vocational, and extracurricular involvement were noted, as well as the degree of integration experienced by students. Schedule reviews of 458 handicapped students in 11 public high schools showed:

- low numbers of handicapped students in the high schools. Approximately 3 percent of the combined high school populations were officially classified as handicapped.
- participation by handicapped students in an array of programs. Handicapped students were involved in a range of academic and nonacademic courses. Slightly less than half of the 458 handicapped students were participating in some form of prevocational/vocational class or work experience program. Extracurricular involvement was low, however.
- high degree of integration in nonacademic classes. Nearly three-fourths of the 458 handicapped students were participating in nonacademic courses with nonhandicapped peers.
- tendency toward nonintegrated academic and vocational services. More than half of the 458 handicapped students received academic coursework solely through special education, or were taking no academic coursework at all. Of the students involved in vocational opportunities, the majority were enrolled in special, nonintegrated programs.
- some isolation of handicapped students for the entire school day. Approximately 16 percent of the 458 handicapped students had no classes of any sort with nonhandicapped students; an additional 18 percent, were enrolled in only one course with their nonhandicapped peers.
- special education teacher certification requirements and the nature of work experience programs raised some questions as to the comparability of courses for handicapped students. Special education teachers rarely had subject matter specializations or secondary level concentrations. Work experience programs removed 15 percent of the 458 students from school for a half day or more; 6 percent of the handicapped students worked all day and did not attend school.

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PATTERNS OF HANDICAPPED STUDENT ENROLLMENT IN HIGH SCHOOL

The Education for All Handicapped Children Act, P.L. 94-142, mandates full educational opportunities to our nation's handicapped students. They are to have access to the range of courses and activities provided to nonhandicapped students and, when appropriate, to participate in those areas in integrated settings. To many school systems, the provisions of access and least restrictive environment required substantial changes in the way handicapped students had been served. High schools, in particular, were subject to significant challenges. At this level, the number of academic, nonacademic, vocational, and extracurricular offerings is far greater than that of junior high or elementary schools. Graduation requirements and job skill development are additional concerns for high school students, especially those that are handicapped. There are more students in a high school; more handicapped students, therefore, should be served.

Examination of national child count data, however, shows that the number of handicapped students at the secondary level is below the expected prevalence rate. Even districts with adequate identification and service programs at the elementary level may show drops in percentages at the secondary level. Informal discussions with Directors of Special Education in several states indicate a consistent, progressive decline statewide in the number of handicapped students in each successive grade level. Thus, overall child count data suggest that factors peculiar to secondary education and students are preventing full implementation of the Act. An unknown number of high school handicapped students may be unserved, either because they drop out of school or because they are not identified. The underserved or inappropriately served handicapped students of today, may be tomorrow's high school dropouts.

In spite of the fact that high school education for handicapped students shows evidence of unique problems, little is known about the composition of the population or the opportunities in which these students actually participate. The types of students being served, the courses they are enrolled in, the degree of integration, and the comparability of special and regular education offerings are, therefore, areas requiring research before secondary programming for handicapped students can be adequately understood. To provide preliminary background information on these basic areas of concern, the Office of Special Education (OSE) (formerly the Bureau of Education for the Handicapped) contracted with Applied Management Sciences.

One or more high schools in each of eight school districts were visited in the spring of 1980. Half of the districts were urban areas (SMSA's according to the 1970 U.S. Census) and half were rural areas. Sites were selected from two states, one state with a high secondary child count and another with a low secondary count. The presence of vocational schools and/or special schools in the area of the site was also a selection criteria. Finally, to maintain consistency among rural sites, all rural districts visited were participating in cooperative special education arrangements.

One week on site was spent by a two-person team in urban areas; one week by one person was spent in rural areas. Class schedules of <u>all</u> special education students in each high school visited were reviewed to determine the specific coursework being taken that semester, the provider of that class (special, regular, or vocational education), and the level of difficulty (remedial, average, accelerated) of regular education academic courses. Clarification/verification of the nature of specific courses was obtained by speaking with special/regular/vocational teachers and supervisors, as well as principals and counselors. In all, over 100 persons from 11 comprehensive high schools, 5 special schools, and 3 vocational schools participated in this effort.

Guiding the project and the organization of this report were several key questions of concern:

- Who are the secondary-aged handicapped students being served?
- Are secondary-aged handicapped students participating in a full array of services?
- To what extent are secondary-aged handicapped students receiving services in an integrated setting?
- Do secondary-aged handicapped students receive programs of services that are comparable to those for nonhandicapped students?

The remainder of this report consists of answers to these questions as indicated by the review of class schedules of handicapped high school students. Each section begins with a restatement of the relevant question, followed by a discussion of the applicable findings. The first question addresses the basic background data of handicapped populations in high schools: overall numbers, specific conditions, sex, and grade level. In examining the second question of service array, the courses taken by handicapped students are analyzed by subject matter. The third question concerning integration looks at the degree to which handicapped students were enrolled in courses with their nonhandicapped peers, the types of courses which tend to be integrated, and the rationales expressed for nonintegrated service delivery. The final question on comparability discusses high school handicapped students' access to the full range of services and the nature and quality of those services. In the conclusion of this paper, noted service gaps and future programming needs are addressed.

In interpreting the information presented here, several points need to be remembered. First, no attempt has been or should be made to generalize from these findings to the nation at large. Second, for the most part, information across sites has been collapsed and presented in total; where significant deviations within a site from the overall pattern occur, these have been noted. Minor discrepancies, however, may exist within specific sites.

As far as is known, this effort is the first to look, in depth, at the patterns of enrollment evidenced by high school handicapped students. Until now, general information concerning the amount of time handicapped students spend in integrated/nonintegrated settings was available, but never with the detail (e.g., specific subject areas, levels of difficulty) presented here. These data should contribute significantly to an understanding of the patterns observed and the reasons behind them.

WHO ARE THE SECONDARY-AGED HANDICAPPED STUDENTS BEING SERVED?

Before discussing specific characteristics of the handicapped students whose schedules were reviewed, the number and percentages found overall in the schools are addressed.

Prevalence Levels

Consistent with earlier data, handicapped student enrollment in the high schools visited showed low numbers of students counted. In all, 458 handicapped student schedules were reviewed in the 11 comprehensive high schools visited. Yet this number represents an average of only 3 percent of the combined total school populations (see Table 1). Within sites, the proportion of identified handicapped students served in the high schools ranged from 2 percent to 7 percent (this last site was a rural school with a very small total enrollment). In all cases, high school special education enrollment fell short of the expected national estimates of 10 percent.

To some extent, these overall percentages may be low because students in special schools are not included in the high school figures. A few students in a school's jurisdiction were also not counted if they were attending a categorical program at another school. The number of students this affected was small, however, and offset by the inclusion of students outside other school's jurisdictions who were attending categorical programs in the schools visited. Also, the effects of remediation through elementary and junior high services may be reflected in the low numbers counted at the high schools. For example, only one of the 458 students was found to have a Speech Impairment as the primary disability. When compared to the large numbers of speech impaired children at the elementary level, it is apparent that remediation has had an effect.

However, the low figures cannot be totally explained by placements outside of the home school or the effects of remediation. Some handicapping conditions are permanent and many students with these disabilities may continue to require special services to some degree. Teachers speculated that some handicapped students were not in school,

TABLE 1: POPULATIONS OF SECONDARY SITE SCHOOLS

Site	Total Enrollment	Special Education Enrollment	Sp. Ed. % of Total Enrollment
A	1,400	73	5%
B_1	2,700	59	2%
B_2-Voc./Acad.	2,300	64	3%
C_1	2,193	77	4%
C_2-Vocational	854	57	7%
D	1,256	49	4%
E	350	25	7%
F_1	1,300	67	5%
F_2-Vocational	500	25[1/]	5%
G (3 schools)	1,416	22	2%
H_1	1,006	22	2%
H_2-Vocational	434	3	1%
Total-Academic[2/]	13,921	458	3%
Total-Vocational	1,788	85	5%

1/ Special education students in disadvantaged/handicapped programs only. No figures on special education participation in other vocational coursework.

2/ Includes B_2, the Vocational/Academic school at Site B.

either because they had dropped out or were expelled. Other students may remain unidentified because teachers did not know who to refer for special education. Referral disincentives also were present, impeding the identification of undetected handicapping conditions. In some cases, teachers may feel that, by high school, all children needing help have already been identified. Referral to special education may seem futile this late in a student's education. Also, when no suitable programs exist, teachers tend not to refer students. This problem was particularly acute for emotionally disturbed (ED) pupils. Stigma, moreover, was another disincentive, again especially in the case of ED students.

Finally, one site had an unusual team teaching arrangement which, although providing services, also acted as a disincentive to formally identifying and counting students under P.L. 94-142. Low-level "regular education" students and special education students were taught together by a team composed of a regular and a special education teacher. Whether labeled as handicapped or not, these students would still receive the same service. Thus, there was little incentive to refer students for formal testing, since the outcome was likely to remain unchanged. The effects of this situation were beginning to be felt, however; the school had already lost one special education teacher slot due to low official counts of special education students.

Returning to Table 1, enrollment of handicapped students in vocational schools shows a somewhat higher prevalence level. Combining the handicapped enrollments at the 3 vocational schools visited, an average of 5 percent of the students in vocational schools were handicapped. Across vocational schools, the proportion of special education students ranged from 1 percent to 7 percent. Although the total enrollments at vocational schools were small, and the number of schools visited smaller still, there did appear to be efforts to involve handicapped students in some form of vocational coursework. The vocational school with the highest proportion, in fact, had been involved in joint special-vocational education workshops, participated (at their

request) in IEP conferences, and were serving students strictly in regular vocational courses, rather than special, isolated programs.

Still, the rough estimates of 5 percent handicapped in vocational schools and 3 percent in comprehensive schools found at the sites visited, is lower than that projected nationwide. Data from the schedule reviews, therefore, confirm the likelihood that there are unserved students at the secondary level.

Handicapping Conditions

A range of handicapping conditions was found in the composite of high school schedules reviewed (see Table 2). The categories of learning disabilities (LD) and educable mental retardation (EMR) were clearly most prevalent. Of the 458 handicapped students in the comprehensive high schools visited, 45 percent (n = 205) were labeled as learning disabled and 40 percent (n = 185) as educable mentally retarded. When trainable mentally retarded (TMR) students are added to these numbers, a full 88 percent of all students in the comprehensive high schools were classified either as LD or MR. (The TMR pupils were all at one site in a categorical program.)

At the opposite end of the spectrum, low incidence conditions were also represented in correspondingly smaller proportions. Visually handicapped, physically/orthopedically handicapped, otherwise health impaired, and hearing handicapped students were identified special education pupils across a variety of schools. The seemingly high number of hearing handicapped students reflects the existence of a categorical program for these pupils at one of the site schools. The actual number of physically/orthopedically impaired students in the schools visited may be slightly higher than it appears since some of these students were in the schools, but not receiving special education services, and therefore not counted or included in our review of class schedules.

Of particular interest is the number of emotionally disturbed students revealed through record reviews. Although the third most frequent condition found, ED pupils comprised only 6 percent of all handicapped students identified in the high schools. The general

TABLE 2: HANDICAPPING CONDITION OF STUDENTS

Condition	Number	% of Total
Learning Disabled	205	45%
Educable Mentally Retarded	185	40
Emotionally Disturbed	27	6
Hearing Handicapped	18	4
Trainable Mentally Retarded	16	3
Otherwise Health Impaired	3	1
Physically/Orthopedically Impaired	2	*
Visually Handicapped	1	*
Speech Impaired	1	*
TOTAL	458	99%

*Less than 1 percent.

consensus in these schools was that the number of labeled ED students was likely to be lower than the actual number of pupils with emotional disturbances. The stigma of the ED label was great, so students were sometimes classified as LD instead, or parents might refuse testing. Students with emotional problems may also be more likely to drop out or be expelled before the condition is detected. Finally, the absence of ED programs was a deterrent to identification of this condition. (Only one of the schools visited had a special ED program.)

Male/Female Distribution

Males consistently outnumbered females in special education enrollments. Of the 458 handicapped student schedules reviewed, 299 students (65%) were male and 159 (35%) were female. The range by site varied from 72 percent male to 58 percent male, with the majority of sites in the 62-68 percent range. There was speculation by a special education counselor that the higher number of males in special education was tied to a higher referral rate for males in general. Students referred to special education tended to be ones exhibiting more overt behavioral problems. She felt that the quiet, well-dressed, attractive student usually was not considered, or not noticed enough, to be a candidate for special education. To the extent that females have, or are perceived to have these traits, they are less likely to be identified as handicapped. The overriding, yet still unanswered question, however, is whether males are overrepresented or females, underrepresented in the handicapped population.

Grade Level Distribution

There was a fairly even distribution of ninth through twelfth graders among the 458 schedules reviewed, although enrollments did drop some as the grade level increased (see Table 3). Ninth graders comprised 28 percent of the handicapped pupils; tenth graders, 26 percent; eleventh grade students, 20 percent; and twelfth grade seniors accounted for 22 percent of the schedules reviewed. One of the smaller sites visited had eighth grade students in high school, 5 of whom were handicapped (1% of

TABLE 3: GRADE LEVELS OF STUDENTS

Grade Level	Number	% of Total
Eight Grade	5	1%
Ninth Grade	126	28%
Tenth Grade	119	26%
Eleventh Grade	90	20%
Twelfth Grade	102	22%
Ungraded (TMR)	16	3%
TOTAL	458	100%

the total 458 pupils). Finally, ungraded TMR students at one school comprised 3 percent of the total population of handicapped students whose schedules were reviewed.

With the exception of two sites, the remaining six schools visited displayed this general tendency for the number of special education students to decline with age or to rise slightly at the twelfth grade. This latter pattern may reflect handicapped seniors being held back a year to complete graduation requirements. The other two sites showed a rise in special education enrollments as grade levels increased.

ARE SECONDARY-AGED HANDICAPPED STUDENTS PARTICIPATING IN A FULL ARRAY OF SERVICES?

In addition to the number and types of students served, the particular kinds of courses handicapped students were enrolled in was of interest. The programming areas were divided into four basic categories: Academic, Nonacademic, Vocational, and Extracurricular. Table 4 shows, by subject area, the number and percentage of handicapped students enrolled in academic, nonacademic, and vocational courses. Since extracurricular involvement was rarely noted on student schedules, the figures for this are simply discussed in the text; no table to display these numbers is needed.

Academic Coursework

The majority of handicapped students were receiving academic instruction in English, Math, and Social Studies at the time their schedules were reviewed. To a lesser extent, students also were enrolled in Science and Reading classes. Virtually no handicapped students were involved in Foreign Language courses.

Most special education students (80%) were taking an English course, and more than two-thirds (69%) received instruction in Math. Just barely half of the total handicapped population (51%), however, were enrolled in a Social Studies course, and less than half (41%) were involved in Science classes. Reading (14%) and Foreign Languages (2%) had a low degree of involvement.

As would be expected, most academic courses taken by handicapped students were at the remedial level, rather than average or accelerated. Almost all of the students whose schedules were reviewed (92%), were enrolled in a remedial academic course. Much fewer students (15%) were taking average academic classes, and only 3 handicapped students (0.7%) were involved in accelerated courses.

A few variations by handicapping condition and grade level were noted in the area of academic courses. Hearing Handicapped (HH) students were the only ones enrolled in accelerated courses (Math and Science), and had

TABLE 4: COURSEWORK RECEIVED BY SPECIAL EDUCATION STUDENTS REGARDLESS OF PROVIDER AND LEVEL

Academic Area	Number Enrolled (Unduplicated Count)	% of Total Students (N=458)
English	367	80%
Math	318	69%
Social Studies	233	51%
Science	186	41%
Reading	62	14%
Foreign Language	7	2%
Nonacademic Area		
Art	63	14%
Music	25	5%
Physical Education	232	51%
Driver's Education	18	4%
Health	88	19%
Home Economics	88	19%
Business Skills	29	6%
Industrial Arts	52	11%
Study Hall	92	20%
ROTC	25	5%
Drama	6	1%
Teacher Aide	12	3%
Other	27	6%
Vocational Area		
Prevocational/Orientation	42	9%
Vocational Classes	110	24%
Work Experience	108	24%

a slightly higher representation in average academic coursework (Math) than the overall handicapped population. In addition to HH students, LD pupils also tended to be enrolled in average academic classes more so than other conditions. (Table A.1 in Appendix A shows the enrollment of special education students by course and handicapping condition.)

The sex of the student did not appear to bear any relationship to enrollments in academic courses. (See Appendix A, Table A.2.) Other than a tendency for males to be slightly less involved in Social Studies, academic enrollments reflected the male/female distribution in the total handicapped population of the combined site schools. The grade level of the student did, however, affect academic involvement. As grade level increased, academic (and nonacademic) enrollments decreased (Table A.3). This fluctuation seems to have been caused by a higher vocational involvement of older students.

Nonacademic Coursework

Handicapped students participated in a wide range of nonacademic courses. More than half (51%) were enrolled in Physical Education classes, the nonacademic course with the highest degree of participation. In lesser numbers, handicapped students were involved in Study Hall (20%), Health (19%), Home Economics (19%), Art (14%), and Industrial Arts (11%). Business courses, Music, ROTC, Driver's Education, Teacher Aide programs, and Drama were also taken by special education students.

In some instances, however, the amount of nonacademic involvement was alarming for its excesses. In the case of 26 students (6%), well over half of their school day--4 or more periods--was spent in nonacademic classwork. One school in particular contributed significantly (18 of the 26 students) to the number of handicapped pupils in this situation. A typical school day for many of these students consisted of Math and English classes, plus Physical Education, Health, Art, and Home Economics or Industrial Arts, depending on the sex of the student. Study Hall was also a fairly frequent nonacademic class listed on student schedules at this school.

The most extreme example of this nonacademic "overinvolvement" occurred at this school with an LD 11th grader whose course schedule listed 4 periods of Study Hall and 1 of Physical Education; the student was also allowed to miss one period, thus only 5 class periods were accounted for. The explanation for this scheduling was that the student did not come to school much. This was undoubtably true, but with the prospect of spending all day in a study hall (with no courses to study) and 50 minutes in gym class, any incentive for this student to attend school had been effectively removed.

No significant differences in nonacademic enrollments for specific handicapping conditions were noted. The sex of the student, although not affecting overall involvement, did have a relationship to some of the specific kinds of nonacademic courses taken. Enrollment followed traditional, sterotyped patterns for several courses. Females tended to be more involved in Home Economics, Business Skills (e.g., Typing), and Music courses than did males. Conversely, males were more likely to participate in Industrial Arts (98% of the handicapped students enrolled in this course were males), Driver's Education, and ROTC.

As mentioned in the previous section, nonacademic participation declined as grade level increased, due to greater vocational involvement of older students.

Vocational Coursework

Returning to Table 4, enrollment in vocational classes shows that handicapped students were involved in different types of vocational training (prevocational, vocational classwork, and work experience). Only 9 percent of all handicapped students, however, were receiving prevocational/career orientation classes at the time of schedule review. Nearly one-fourth (24%, n=110) of the students were enrolled in vocational classes (e.g., Agriculture, Building Trades) and a similar proportion (24%, n=108) participated in work experience programs. Overall, as will be discussed later, almost half of all the handicapped student schedules reviewed (48%) showed some form of vocational involvement.

Participation in vocational programs did show some differences by handicapping condition. The majority of students enrolled in work experience programs were EMR and TMR pupils; EMR students were also disproportionately involved in prevocational courses. Sex-traditional enrollments also occurred in the vocational area. Although representing 65 percent of the total handicapped student schedules reviewed, 74 percent of the students in prevocational courses were males as were 72 percent of those participating in work experience programs. Finally, seniors were much more likely to be involved in vocational programming: 75 percent of the handicapped seniors were receiving some form of vocational education. The most vocational involvement of seniors occurred through special work experience programs.

Extracurricular Involvement

Student schedules rarely noted extracurricular activities of students. For only 30 of the handicapped pupils was extracurricular involvement indicated: 24 of these in sports (5%) and 6 in clubs (1%). Although the number of handicapped students participating in extracurricular activities is undoubtably higher than schedules show, this was an area mentioned by counselors and teachers as needing improvement. The generally low degree of extracurricular involvement by handicapped students may reflect several factors. A reluctance to join clubs or sports could be an indication of general apathy on the part of the entire student population. In addition, students who must be transported any distance--either to be in a special categorical program or to attend a vocational school--could not participate in after-school activities. The same was true of students who worked.

Of all handicapping conditions, LD pupils were the most likely to be involved in extra-curricular activities, especially sports. Most students involved in clubs were females (67%), and those in sports were males (94%). No major difference by grade level appeared.

Multiple Course Enrollments

Throughout the above discussion, course enrollments have been analyzed regardless of the provider of the course (regular, special, or vocational education). Because some students were enrolled in duplicate courses, e.g., two special education English classes or a special and a regular education English class, unduplicated counts were used. Table A.4 in Appendix A shows the frequency with which multiple coursework appeared on the student schedules reviewed. Math courses were most often duplicated; 19 students had two special education Math classes listed on their schedules, and 5 other students were enrolled in both a special and regular education Math course that semester. The remaining academic areas and several nonacademic classes were repeated by handicapped high school students in several instances.

In subsequent sections of this report, enrollments are broken down by provider. In these instances, students taking a regular and special class in the same subject area are counted in both. When multiple courses have been taken by students from the same provider (e.g., special education), however, these figures are reported as unduplicated counts.

Summary

Handicapped students in high school participated in a range of academic, nonacademic, vocational, and extracurricular programs. Most handicapped students were receiving English, Math, and Social Studies, but fewer than half of all special education students were enrolled in Social Studies or Foreign Language. Most academic courses taken by handicapped students were remedial classes; few students participated in average or accelerated programs.

The full array of nonacademic classes was represented on special education student schedules. On a few occasions, however, the extent of nonacademic coursework taken by individual handicapped students seemed excessive. Sexually traditional enrollment patterns (e.g., Home Economics for females, Industrial Arts for males) were also in evidence.

Almost half of the 458 handicapped students were involved in some form of vocational education as well. Seniors, in particular, were most likely to be enrolled in vocational programming, especially work experience programs.

Finally, extracurricular activities were rarely noted on student schedules. Teachers and counselors, however, indicated that participation was low and this area of involvement needed improvement.

TO WHAT EXTENT ARE SECONDARY-AGED HANDICAPPED STUDENTS RECEIVING SERVICES IN AN INTEGRATED SETTING?

To examine the degree to which handicapped students engaged in courses and activities with their nonhandicapped peers, each student's schedule was analyzed by integrated class enrollments. The information was broken down by major programmatic area (e.g., Academic, Nonacademic) and for the school day overall. Table 5 shows the results of this analysis. After a discussion of integrated enrollment patterns, the reasons for and ways nonintegrated services are delivered follow.

Academic Involvement

Nearly one-half of the 458 student schedules reviewed indicated that all academic instruction received by handicapped pupils was in a non-integrated setting (n = 218; 48%). Approximately 7 percent additional students (n = 31) received no academic coursework of any kind. Most of these students (n = 28) were not involved in academic classes because they worked all day. Combining these totals, then, 54 percent of the handicapped students in the high schools visited were not in academic courses with nonhandicapped peers.

Of those in integrated settings, most students were taking one or two academic courses in a regular classroom. A few students (n = 26; 6%), however, were enrolled in 4 or more integrated academic classes; nearly all, if not all, academic coursework was received by these students in an integrated setting. (There are usually 6 periods in a high school day.)

The specific courses taken, by provider and level of difficulty, are shown in Appendix A, Table A.5. Integration of handicapped students in academic areas was low because most students received academic instruction from special education. Since special education primarily offered academic classes, this is not surprising.

Nearly 70 percent of all handicapped students in the high schools visited received instruction in English from special education (n = 315; 69%). Next in frequency were students enrolled in special education Math; slightly more than half of the 458 handicapped students

TABLE 5: DEGREE OF INTEGRATION OF SECONDARY HANDICAPPED STUDENTS

Number of Integrated Courses	% of Total Handicapped Students Enrolled in Integrated Courses (N = 458)				
	Academic	Non-Academic	Career/ Vocational	Extra-Curricular[1]	All Courses
No Integrated Courses	47.6 (n=218)	5.5 (n=25)	28.6 (n=131)	1.7 (n=8)	16.4 (n=75)
1 Integrated Course	16.2 (n=74)	28.6 (n=131)	17.0 (n=78)	4.8 (n=22)	17.5 (n=80)
2 Integrated Courses	14.2 (n=65)	21.8 (n=100)	2.0 (n=9)	--	16.2 (n=74)
3 Integrated Courses	9.6 (n=44)	16.4 (n=75)	--	--	15.7 (n=72)
4 or More Integrated Courses	5.7 (n=26)	5.7 (n=26)	--	--	34.3 (n=157)
No Coursework in this Area	6.8 (n=31)	22.1 (n=101)	52.4 (n=240)	93.4 (n=428)	

[1] Extracurricular activities were rarely listed on class schedules.

were taking Math instruction through special education (n = 233; 51%). Special Social Studies and Science courses also had substantial numbers of handicapped students enrolled in them (n = 161; 35% and n = 124; 27%, respectively).

Of all regular education academic classes, Math was the one most often taken by handicapped students; whether an average-level or remedial course, 20 percent of all special education students (n = 90) participated in a regular Math course. Regular Social Studies (n = 74; 16%), Science (n = 63; 14%), and English (n = 55; 12%) had, combining all levels of difficulty, decreasingly lower levels of handicapped student enrollments.

Before turning to nonacademic coursework, it is interesting to note the extremely low level of involvement in Foreign Languages. Out of 458 students, only 4 were enrolled in a Foreign Language class, and 3 others in English as a Second Language (ESL). The reasons for this are not clear. It may reflect a general decline in Foreign Language coursework. Foreign languages may be considered a "frill" which takes time away from more necessary basic academic skill work. College-bound students may be the major participants in foreign language classes. Since few if any handicapped students appeared to be considered potential college candidates, this may contribute to why they are not enrolled in these classes.

Nonacademic Involvement

Nonacademic classes showed a much higher degree of integration, in part because special education did not tend to provide classes in this area and, in part, because the cognitive demands for successful participation are not as great in nonacademic activities. Only 25 students (6%) were solely involved in nonacademics in an isolated setting (Table 5). Furthermore, 10 of these 25 students were TMR pupils from one site. (It should be noted that the other 6 TMR pupils from this site were involved in integrated nonacademic classes.)

Over one-fourth (n = 131; 29%) of the 458 handicapped students were integrated into a regular nonacademic course and slightly less than that number (n = 100, 22%) were in two integrated nonacademic classes. Combining all students participating in nonacademic courses with nonhandicapped peers, a full 72 percent of the 458 schedules showed integrated involvement.

Physical Education was the most predominant nonacademic course in which handicapped pupils participated (See Table A.5). Slightly less than half of the 458 students (n = 217; 47%) were enrolled in regular physical education classes. Twenty-five students across two sites participated in ROTC, an allowable substitute for Physical Education. In particular, the structure and repetition of ROTC were mentioned as facets which made the class especially comfortable for handicapped students to enroll in. There was some concern expressed about the students handling guns, but so far no incidents have occurred. An additional 15 students received Physical Education through courses provided by special education.

After Physical Education (a required course for most students), Study Hall was the next nonacademic class with high special education student enrollment. Of the 458 students, 18 percent (n = 83) were enrolled in regular Study Hall and another 2 percent (n = 10) were in Study Halls monitored by special education. In several sites, Study Hall was required of a certain grade level of students (usually ninth grade). The remaining nonacademic courses with a relatively high enrollment of handicapped students were all provided by regular education and were as follows: Home Economics (n = 68; 15% of the 458 special education students); Health (n = 62; 14%); Art (n = 57; 12%); and Industrial Arts (n = 52; 11%). Nonacademic courses provided through special education had much lower levels of involvement, reflecting the absence of these courses at many sites.

While it appears that handicapped students are fairly well involved in nonacademics, it should be remembered that multiple course enrollments were possible and did occur with some frequency. That is, the same student may be in Physical Education and Home Economics, for example. In fact more than one-fifth of the 458 handicapped students (n = 101; 22%)

were not involved in any kind of nonacademic course. As discussed earlier this appears to be partially a function of the grade level of students. As pupils got older they tended to participate in vocational rather than nonacademic classes. For example, 12th graders comprised 22 percent of the handicapped students in the high schools visited, yet they accounted for only 5 percent of those enrolled in regular Health classes; 8 percent of those in Industrial Arts; 9 percent of those in regular Physical Education classes; and 12 percent in regular Home Economics courses.

Vocational Involvement

About half of the students in the handicapped population under study were participating in some form of vocational/work experience, and the other half were not (48% versus 52%, respectively). It is clear from Table 5, however, that the predominant means of providing vocational experience was through special, nonintegrated courses. A total of 218 handicapped pupils were enrolled in prevocational, vocational, or work experience programs; of this number, 60 percent (n = 131) were served in special, isolated programs (or 29 percent of the total 458 student schedules).

Special work experience programs were the most popular, with 99 special education students enrolled (versus 9 in regular/vocational work programs); special prevocational courses had 42 students (versus only 1 handicapped student in the regular counterpart). (Because some students took a combination of these classes, e.g., special coursework in the morning and work in the afternoon, the numbers are duplicated.)

Vocational coursework (e.g., Agriculture, Building Trades) showed a greater degree of integration, however. Regular or vocational education provided integrated courses which were taken by 68 handicapped students (15% of the 458 schedules reviewed) and provided special classes (for handicapped students only) taken by 42 students (9%)).

Extracurricular Involvement

Because extracurricular activities were rarely listed on class schedules, it was not possible to accurately assess the degree to which handicapped students participated in clubs and sports. In Table 5, the 8 students involved in nonintegrated extracurricular activities were all TMR students from one site who had their own basketball team. Only 22 other students (5%) had extracurricular activities listed on their schedules (generally sports or clubs which met during school hours). This leaves 93 percent of the handicapped students whose schedules were reviewed unaccounted for. Although teachers and counselors indicated that more students were involved in extracurricular activities than their schedules showed, staff at the high schools also felt that greater social involvement of this kind was needed for their students. In the past, when special education teachers sponsored clubs, they had noticed an increase in their students' involvement. At the time of schedule review, however, special education teachers were not sponsors of any clubs.

Overall Involvement

For each student schedule reviewed, the entire school day was analyzed to ascertain the amount of class time handicapped pupils spent in integrated settings. More than one-third of the 458 handicapped students (n = 157; 34%) had 4 or more integrated courses (out of a 6 period day). In a few instances, some of the handicapped students had been returned completely to the mainstream. Adding students spending half a day (3 courses) in integrated settings, raises the number of the handicapped pupils with at least half-time exposure to nonhandicapped pupils to exactly 50 percent (n = 229). In fact, this number is actually a conservative estimate because courses, not class periods, were counted. Vocational courses generally lasted 2-3 periods, but are counted in Table 5 as only 1 course.

At the opposite extreme, 16 percent (n = 75) of the handicapped students did not spend any time in regular classes, and another 18 percent (n = 80) had only 1 class during the day with nonhandicapped students.

The degree of integration varied somewhat by site. Three schools in particular contributed significantly to high levels of integration. One of these schools was the one with a team teaching arrangement for all but ED pupils. EMR and LD students were served by special education, but in an integrated setting. The ED pupils at this school, moreover, had a fair degree of integration themselves. Only 3 handicapped students at this school (out of 59 handicapped pupils) were not in any integrated courses. (One student was an ED child attending school part time; the other two were EMR students who worked all day in a special work experience program.)

The second school with a high degree of integration was one where special education offerings were, in effect, limited to Math and English. Students in this school took an inordinate number of nonacademic classes, thus raising the level of integration. None of the 64 handicapped pupils at this school were completely isolated all day. (Schedules of an estimated 5 students enrolled in a special all day work experience program were not maintained at the school and therefore could not be reviewed.)

Finally, the third school did not use an integrated teaming situation to deliver special education courses nor was the level of integration raised by default through a lack of special education offerings. This school had few handicapped students isolated all day (only 4 out of 77) because of a concerted effort to integrate students in academic, nonacademic, and vocational classes.

Conversely, two other schools contributed significantly to lower levels of integration. At one school, an all day special work program accounted for 20 of the 21 handicapped pupils with no integrated classroom exposured (out of 73 handicapped students in the school). Similarly, the second school had TMR students and a high number of all kinds of handicapped students engaged in half-day special work programs. Most of the 20 students (out of 67) without regular classroom exposure were students spending half of the day in special education academic classes and the other half, working.

Nonintegrated Services

Special education students have been traditionally served in separate classes by their own special teachers. Grouping handicapped students in this way has advantages. Pupil/teacher ratios are usually lower, allowing more individualization in instruction. Where programs are categorical, teachers with specializations in that particular handicapping condition can be used, thus improving the quality of services received. Classroom instruction is geared at the students' level, enabling them to take coursework which would have been too advanced if provided in the regular classroom. Finally, special classes and schools remove handicapped students from possible ridicule and alienation by their nonhandicapped peers.

Nonintegrated services, then, are the other half of the picture of service delivery to handicapped students. The following section discusses the four major configurations for provision of special services.

The traditional special class taught by a special education teacher was used primarily for academic courses, prevocational classes, and the few instances when special nonacademic courses were offered. The second manner of providing nonintegrated services was that of a regular educator teaching his/her content area to a class consisting solely of handicapped students. This configuration was generally used in vocational courses. The third and most extreme form of isolated service delivery was that of the special school--where all children in the school were handicapped and therefore all classes and activities were nonintegrated. These schools usually offered academic, nonacademic, extracurricular, and vocational courses on a limited basis, and always in a nonintegrated setting.

Finally, work experience programs coordinated by special education have also been classified as nonintegrated services. Although most students in these programs were working in community jobs with nonhandicapped co-workers (the exception being TMR students in a sheltered workshop), the environment and circumstances of these programs were sufficient to consider them nonintegrated special education programs. First, these work programs were monitored by special education

coordinators who were also responsible for assigning grades (usually after input from the employer). The "co-workers" in question were, for the most part, adults since most school-aged students should be in school during school hours when the work programs took place. Thus, handicapped students were not exposed to their nonhandicapped peers, but rather to nonhandicapped adults. In addition, a work place does not allow the socialization opportunities that a school environment does. Finally, these programs were restricted to special education students only. In the few instances when handicapped students participated in similar work experience programs for regular education students (often disadvantaged pupils), these have been classified as "integrated" courses.

Each of the above methods of providing services in nonintegrated settings will be discussed in turn.

Nonintegrated Services Provided by Special Education

As discussed earlier, special education generally provided coursework in the basic academic areas--English, Math, and to a lesser extent, Science, Social Studies, and Reading. Nonacademic courses provided by special education often came into being because students experienced difficulty in the regular class counterpart. Special education Health is a prime example of this. Health is generally a required course for graduation and, because there is bookwork associated with it, can cause problems for special education students who have difficulty reading. In half of the sites visited, special education teachers were providing Health classes to the students that needed them that quarter/semester. (Health is usually a 6-week course taken by students at different times in the school year.) These classes then counted toward graduation. At one site a similar arrangement with Driver's Education was operating. Special education covered the bookwork; the handicapped students would then join the rest of the pupils in the summer for practical driving experience. Several special education students participated as teacher aides in both regular and special education classes. (On a few occasions, mention was also made of regular education students assisting special education teachers.) Special Art, Physical Education, and Home

Economics classes were also conducted for TMR students at one site by the TMR teacher. These pupils, however, were ungraded and did not receive a standard diploma.

Prevocational courses were provided by special education teachers at half of the sites visited. These classes usually covered basic work orientation skills--filling out applications, interviews, time cards, work attitudes and habits, etc.--and/or they provided an overview of occupations and job skills. Special work programs (from 1 period to all day in duration) were present at all sites; in some cases the special education teacher was the coordinator, in others an area special education staff member handled this responsibility.

Thus, special education teachers provided a range of academic courses, as well as nonacademic and prevocational/work experience programs. In many instances, these teachers were also working with different handicapping conditions at different age and maturity levels. Yet the background and training of many special education teachers did not prepare them for such extensive responsibilities. For example, at one site the special education teachers taught LD, ED, and EMR pupils together; students were assigned to teachers by grade level. Each teacher was responsible for teaching English, Math, Science and Social Studies. Special Health, Driver's Education, and prevocational courses were also offered by special education. The head special education teacher was also the coordinator for the work study program. Special education teachers at this school, however, had only K-12 certification. There was no secondary level concentration nor specific content specialization.

At other sites, special education teachers specifically mentioned certain content areas where they tried to integrate students because that teacher did not feel comfortable conducting a class in that subject. In still others, some subjects simply were not offered by special education, but students were not integrated into the regular education counterpart either. Students at these sites just did not receive instruction in those areas.

Nonintegrated Services Provided by Regular/Vocational Education

Two of the 8 sites (in the same State) had special vocational programs offered only to special education students and provided by a vocational educator. (One other site, in another State, had special programs for the disadvantaged/handicapped taught by vocational teachers; these courses were considered "integrated", however, and are not discussed here.) Grouping special education students together seemed to be a favored method of delivering services from the point of view of some vocational educators (and Industrial Arts teachers). Their rationale was that they could gear the course more appropriately and keep a better eye on the students. (How the latter could be better accomplished with more handicapped students rather than a few integrated into the regular class, was not explained.)

The possibility of reverse mainstreaming--integrating regular education students into these special courses--was raised. Unfortunately, to acquire state approval and funding for reverse mainstreaming programs, extensive documentation and justification was required (in particular, to ensure that regular education students would not be depriving special education students of services). The administrative burden was too great, so approval and funding for a nonintegrated program, the paperwork for which was much less, was sought instead. This fact was indeed a shame since at one site regular education students had indicated a desire to enroll in the special vocational educational course and, at the other site, there were not enough special education students to fill the program.

Nonintegrated Services at Special Schools

Five special schools in as many sites were visited; 3 of these were for TMR students, 1 for Physically Handicapped, and 1 was a sheltered workshop for TMR trainees. With the exception of the sheltered workshop, these schools provided the basic academic subject areas, limited nonacademic courses (Art, Music, Home Economics, Industrial Arts, and Physical Education), and to some extent prevocational or basic skills

training. Extracurricular activities were also provided, as well as specialized services not present in the high schools (e.g., OT/PT, group therapy, etc.).

The school for the Physically Handicapped was engaged in a concerted effort to reintegrate its students into their home schools. Students were not generally enrolled in special education, although the department was usually notified when the student was about to enter. The director of this school consciously avoided turning his students over to special education because, as he said, once they are in they never get out. Since his students did not need special academic classes, and the high schools did not have OT/PT or adaptive physical education, there was no reason for the student to be in special education. The ultimate goal for this school was to become a centralized therapeutic center for the area.

In contrast, the special schools for TMR students overtly resisted attempts to even partially reintegrate their students into the high schools, or the idea had not yet occurred to them. One director of a special school felt that TMR students were ridiculed by their nonhandicapped peers, and were even more isolated in regular high schools. A director at another site, however, had not considered the possibility of having some of his TMR students attend the regular high school down the street for part of the day. He thought this might be a good idea.

The goal of the special schools was to help their students to become independent and to live and work in the community. Curiously, though, this was accomplished by isolating the students, restricting their exposure to adults who were not handicapped, but not to the peers with whom they would eventually live and work. This protectiveness of their students was mirrored, to a lesser extent, by special education in the high schools. Pervading the attitudes and behaviors of these dedicated professionals was the desire to shield their students from failure, disappointment, uncomfortable situations, and stressful challenges. Yet this is a legacy that must be faced; equal access carries with it equal risks.

Nonintegrated Work Experience Programs

At every site visited, handicapped pupils were enrolled in special work experience programs. The amount of time they were in this nonintegrated environment varied from 1 class period to all day. These programs were seen as an opportunity for students to gain practical work experience or as a means to retain students who would otherwise drop out. In all, 99 handicapped pupils were enrolled in special work programs (22% of the 458). Students who spent all day working (n=28) comprised 6 percent of all handicapped student schedules reviewed.

Summary

The majority of high school handicapped students did have some regular class exposure to their nonhandicapped peers. Most integration occurred through nonacademic involvement. There was still a tendency to provide academic and vocational courses in nonintegrated settings; about half of the student schedules reviewed showed handicapped pupils enrolled in nonintegrated academic and vocational programs. Extracurricular activities were rarely noted on student schedules, but involvement here was also felt to be low.

DO SECONDARY-AGED HANDICAPPED STUDENTS RECEIVE PROGRAMS OF SERVICES THAT ARE COMPARABLE TO THOSE FOR NONHANDICAPPED STUDENTS?

Federal law mandates that the variety of educational programs and services provided to nonhandicapped students be made available to handicapped students. Where needed, specially designed programs and services should also be provided to handicapped students. Thus, the range of options in which handicapped students participate is of interest as well as the substance of those special education courses which have counterparts in regular education. "Course comparability", then, encompasses both areas of range and substance. In the case of the first, equal access is at issue: whether handicapped students are being prohibited from regular educational opportunities. For the second area--substance--the issues of duplicative coursework and quality of special education offerings are of interest.

Range of Options

At no site visited were handicapped students expressly prohibited from any course offering. All students had potential access to all courses. In actuality, however, certain courses (or certain teachers of courses) were implicitly not for special education students. Regular classes were often considered too hard for handicapped students, too competitive, or too independent. Care was taken to place handicapped students in regular classes where the teacher was willing and compatible. The handicapped students themselves were sometimes reluctant to leave the familiarity and comfort of the special education classroom, and their teachers were reluctant to push them into situations of stress and possible failure. All of these factors combined to effectively reduce the regular education options available to handicapped students.

In spite of this, handicapped students did participate in a range of academic and nonacademic courses. They tended to take the same nonacademic classes as nonhandicapped students. Although there was integration into regular academic classes, special education courses were the more predominant means of academic instruction.

Substance of Options

Special education teachers generally had a superficial awareness of the contents and methods used in comparable regular (remedial) education courses. Most of this knowledge seemed to come from helping students with coursework in those classes; in a few instances, special and regular education teachers had talked with each other about the nature of regular education courses. Regular education teachers, on the other hand, had little knowledge about special education classes. This lack of communication concerning coursework had several consequences.

For special education, the decision to integrate a student often could not take into consideration the level of difficulty of that course, simply because this information was not known in detail. The assumption was usually that regular education courses were too hard for handicapped students. In many instances, this may not prove to be true. Thus, handicapped pupils may be unnecessarily isolated. They may be able to handle the coursework, but don't ever have the opportunity to find out.

For regular education teachers there were also consequences from not knowing about special education classes. The main effect of this situation is that the regular education teacher does not know what to expect of the handicapped pupil integrated into that class. The teacher is not equipped with sufficient knowledge of the student's prior experience to facilitate integration. The more special education remains a mystery to regular education, the more suspicious and apprehensive regular education teachers (and students) are likely to be.

Another disturbing aspect of some special education courses was the lack of teacher training in specific content areas combined with, in some cases, the absence of textbooks, course guidelines, and grading standards. On the occasions when this situation occurred, special and regular classes were definitely not comparable.

In general, special education academic classes were described as slower, more narrowly focused, less difficult, more individualized, and with a lower student/teacher ratio than regular (remedial) academics.

Both types of courses were similar in their goals, time devoted to the subject, frequency of classes, graduation requirements, and facilities. Special education classes tended to use a wider variety of materials; regular remedial classes were more likely to be ability-grouped.

On the whole, regular remedial courses appeared to be more similar to special education classes than different. In fact, at one site there wasn't agreement as to which of the two was the lower level course. At another site, a remedial reading teacher referred to her course as the "Special Ed. of the English department." If special and regular remedial courses are so similar, the next logical question is whether more special education students would be integrated into these classes if this similarity were known.

One area where courses did not seem to be comparable, and where the quality was questionable, was that of special work experience programs. Credit toward graduation was given for this experience, yet there was rarely evidence that any kind of complementary coursework accompanied such programs. The extent to which work experience removed special education students from school also raises questions as to the educational value of these programs (See Table A.6). That these programs exist is not so alarming as their pervasiveness. Every site visited had students enrolled in work programs; out of 458 handicapped students, a full 15 percent were spending half of every school day, or more, working. It is ironic that special education students--those who need extra help with school--have special programs which actually reduce the amount of schooling they receive.

There is no doubt that practical working opportunities provide a valuable experience for students. Learning, moreover, is motivated when relevant and concrete applications of that knowledge can be realized through work. Yet there was no indication that these aspects of work were capitalized upon. School and work appeared to be independent, separate entities; thus, the educational value of work was lost, while the practical relevance of school was left unexploited.

SUMMARY AND CONCLUSIONS

P.L. 94-142 has helped bring about significant changes in the way handicapped students are educated. This alteration in traditional approaches to the education of handicapped students has not been easy for schools, but the effects can gradually be seen. Although special schools still seem to have a monopoly on certain segments of the handicapped population (e.g., TMR pupils), an openness to public school participation or actual movement of programs into the public schools was occurring in some instances. The education of handicapped students is now solidly based in regular public schools.

Within the high schools themselves, moreover, handicapped students were involved in a variety of courses, many of them with nonhandicapped peers. Integration was most prevalent in nonacademic courses. Handicapped students participated in a range of offerings with regular education students, although at times the extent to which individual students spent their school day in nonacademic courses seemed excessive. Most special education students also received instruction in the core academic subjects. Such coursework was generally at a remedial level, although some average level classes and a few accelerated courses did have handicapped students enrolled in them. About half of all handicapped students received some academic instruction in a regular class.

Special education students were also involved in vocational programming. Work experience programs, prevocational, and vocational courses were offered through the high schools by special and vocational education in both integrated and nonintegrated settings. Approximately half of all the students participated in some form of vocational program; most coursework was received in a nonintegrated environment, however.

A generally low degree of extracurricular involvement was noted.

While much has happened to improve the quality and variety of opportunities available to handicapped students, much more remains to be done. Lack of content specialization of teachers of special education academics and the extensive use of work experience, raise some questions

as to the quality of education received by handicapped students in these courses. Related services, in particular OT/PT and counseling for physically handicapped students, were notably absent at all of the high schools visited. If adaptive Physical Education courses were available, perhaps more physically handicapped students would be counted and receive services under P.L. 94-142. Programs designed specifically for ED students were also a service gap at all but one of the schools visited. With more programs, more of these students may be identified and served. If ED pupils are prone to dropping out or being expelled from school, appropriate programming may help to keep them in school. Finally, with continued and overt services to the ED population, the stigma and subsequent mislabeling or refusal to test may abate with familiarity.

In addition to these major programmatic areas, refinements to existing programs and services should improve the education of handicapped students in high school and facilitate integration. Among these areas of need are long range planning, progressive vocational training, and greater access to average academic courses. Long range planning of handicapped students' educational development was not often realized. Much of the scheduling was left up to the students. None of the sites seemed to consider and plan for additional years in high school as an alternative course of action. A part of long range planning, was the need for progressive vocational training. Skill prerequisites need to be determined early so that students can be enrolled in the proper combination of classes to gain that experience. With the right background of courses, vocational courses should not prove as difficult, and getting a job would be facilitated.

Finally, greater integration into academic courses seems to be the next major goal for special education students. If, as teachers indicated, handicapped students are fairly successful in remedial academics, then the next step should be greater involvement in average academic courses. The assumption on the part of many teachers that regular courses were too difficult or stressful for handicapped students was sometimes made in the absence of any specific information about those particular classes. There was also a tendency to overprotect special

education students by avoiding situations of possible failure. In fact, the evidence would seem to indicate that special education and regular (remedial) education courses are more alike than not, and that handicapped students can participate in and benefit from classes with their nonhandicapped peers even more so than they are doing now.

To experience success, some risks must be taken. The fear of failure is a genuine concern, but it must not immobilize the strides thus far taken. Indeed, the right to fail should be as inalienable as the right to try. P.L. 94-142 does not guarantee success, but it provides for the freedom of opportunity and the support to attempt it. That is the meaning of true equality.

APPENDIX A

Supplementary Tables

TABLE A.1: COURSE ENROLLMENT BY HANDICAPPING CONDITION

COURSES	HANDICAPPING CONDITIONS																																			
	EMR (n=185)						LD (n=205)						ED (n=27)						HH (n=18)						TMR (n=16)						OHI (n=3)					
	R		S		V		R		S		V		R		S		V		R		S		V		R		S		V		R		S		V	
NON-ACADEMIC																																				
Art	30						19						3						2						3		6									
Music	10						9						4		1										2											
Physical Ed.	85						106						14						7								15				3					
Driver's Ed.	3		1				6		3				3		1																1					
Health	26		12				34		10				1		1						2										1					
Home Econ.	32		10				32						1						1						1		10									
Bus. Skills	10						13						2						3																	
Indus. Arts	20						25						1						3						2						1					
Study Hall	32		4				45		1						5				5																	
ROTC	8						14						2																							
Drama	2						3						1																							
Teacher Aide	4		1						6				1																							
Other	4		3				7		6						3						2								1							
CAREER/VOCATIONAL																																				
Prevoc./Orient.			28		1				10						2														1							
Reg. Coursewk.					19						36		1				1		11																	
Spec. Coursewk.					18						20						3														1					
Work Exper.	4		50		1				36		4				1												10				1					
EXTRACURRICULAR																																				
Sports	2						12						1																		1					
Clubs	1						3						1														8									
OTHER																																				
Counseling	1						1		1						2																						
LD Tutoring									4																											
Deaf Ed.																																				
Therapy																			2																	

TABLE A.1: COURSE ENROLLMENT BY HANDICAPPING CONDITION

COURSES	HANDICAPPING CONDITIONS																							
	EMR (n=185)			LD (n=205)			ED (n=27)			HH (n=18)			TMR (n=16)			OHI (n=3)			PH/OI (n=2)			VH (n=1)			SI (n=1)			TOTAL (N=458)		
	R	S	V	R	S	V	R	S	V	R	S	V	R	S	V	R	S	V	R	S	V	R	S	V	R	S	V	R	S	V
ACADEMIC																														
Accelerated																														
English										2																		2		
Math																														
Science										1																		1		
Social Studies																														
Foreign Language																														
Regular/Average																														
English	2			2			1																					5		
Math	5			10			1			7																		23		
Science	2			12			1			1															1			17		
Social Studies	3			25			3															1						32		
Foreign Language	2			1			1																					4		
Remedial/Basic																														
English	7	145		33	14		3	22		2	12		14			2			1									48	315	
Math	13	122		49	80		3	13			2		13			1	1		2									67	233	
Science	8	49		33	54		2	18		1	2					1			1									45	124	
Social Studies	8	88		29	53		3	13			7					1												42	161	
Foreign Language (ESL)	2			1																								3		
Reading	6	10		22	18		2	2									2		1									31	32	

TABLE A.2: COURSE ENROLLMENT BY SEX

COURSES	Male (n=299)			Female (n=159)			TOTAL (N=458)		
	R	S	V	R	S	V	R	S	V
ACADEMIC									
Accelerated College									
English				2			2		
Math									
Science	1						1		
Social Studies									
Foreign Language									
Regular/Average									
English	3			2			5		
Math	12			11			23		
Science	12			5			17		
Social Studies	19			13			32		
Foreign Language	3			1			4		
Remedial/Basic									
English	29	207		19	108		48	315	
Math	51	145		16	88		67	233	
Science	28	81		17	43		45	124	
Social Studies	22	103		20	58		42	161	
Foreign Language (ESL)	2	-		1	-		3	-	
Reading	16	24		15	8		31	32	

R = Regular Education S = Special Education V = Vocation Education

TABLE A.2: (Continued)

COURSES	Male (n=299)			Female (n=159)			TOTAL (N=458)		
	R	S	V	R	S	V	R	S	V
NON-ACADEMIC									
Art	36	2		21	4		57	6	
Music	11	-		14	-		25	-	
Physical Education	150	7		67	8		217	15	
Driver's Education	11	2		2	3		13	5	
Health	43	20		19	6		62	26	
Home Economics	20	10		48	10		68	20	
Business Skills	10			19			29		
Industrial Arts	51			1			52		
Study Hall	51	5		32	5		83	10	
ROTC	19			6			25		
Drama	4			2			6		
Teacher Aid	2	2		3	5		5	7	
Other (e.g., Photo., A.V.)	9	9		2	7		11	16	
CAREER/VOCATIONAL									
Prevocational/Orientation		31			11	1		42	1
Regular Coursework	1		47			20	1		67
Special Coursework			22			20			42
Work Experience	2	71	4	2	28	1	4	99	5
EXTRACURRICULAR									
Sports	15	4		1	4		16	8	
Clubs	2			4			6		
OTHER									
Counseling	1			1	3		2	3	
LD Tutoring		4						4	
Deaf Education/Therapy					2			2	

R = Regular Education S = Special Education V = Vocation Education

TABLE A.3: COURSE ENROLLMENT BY GRADE LEVELS

COURSES	GRADE LEVELS														
	Eighth (n=5)			Ninth (n=126)			Tenth (n=119)			Eleventh (n=90)			Twelfth (n=102)			Ungraded (n=16)			TOTAL (N=458)		
	R	S	V	R	S	V	R	S	V	R	S	V	R	S	V	R	S	V	R	S	V
ACADEMIC																					
Accelerated																					
English							2												2		
Math																					
Science							1												1		
Social Studies																					
Foreign Language																					
Regular/Average																					
English	1			1			1			2									5		
Math	4			7			9			3									23		
Science	1			7			6			3									17		
Social Studies	2			6			11			8			3						30		
Foreign Language				2			1						1						4		
Remedial/Basic																					
English		5		24	83		15	90		4	75		5	48		14			48	315	
Math		1		32	81		25	57		3	47		7	34		13			67	233	
Science		4		24	46		15	47		3	18		3	9					45	124	
Social Studies		3		11	19		18	37		7	42		6	60					42	161	
Foreign Language				1									2						3		
Reading	1			9	11		13	10		4	7		4	4					31	32	

TABLE A.3: COURSE ENROLLMENT BY GRADE LEVELS

COURSES	GRADE LEVELS																							
	Eighth (n=5)			Ninth (n=126)			Tenth (n=119)			Eleventh (n=90)			Twelfth (n=102)			Ungraded (n=16)			TOTAL (N=458)		
	R	S	V	R	S	V	R	S	V	R	S	V	R	S	V	R	S	V	R	S	V
NON-ACADEMIC																								
Art	3			17			17			8			9			3	6		57	6	
Music				5			11			4			3			2			25		
Physical Education	4			93			66			34			20				15		217	15	
Driver's Education				3	1		5	4		4			1						13	5	
Health				35	23		17	3		7			3						62	26	
Home Economics	1			25	1		23	1		10	5		8	3		1	10		68	20	
Business Skills				6			11			9			3						29		
Industrial Arts	3			26			8			9			4			2			52		
Study Hall				36	4		20	4		15	1		12	1					83	10	
ROTC				12			8			3			2						25		
Drama				31			2			1			2						6		
Teacher Aide				1	1		2	1			5		2						5	7	
Other				2	4		2	8		3	3		4	1					11	16	
CAREER/VOCATIONAL																								
Prevocational/Orient.					17	1		8			8			9						42	1
Regular Coursework						7			23	1		23			14				1		67
Special Coursework						7			14			11			9			1			42
Work Experiences					6			10		2	20	1	2	53	4		10		4	99	5
EXTRACURRICULAR																								
Sports				5			5			4			2				8		16	8	
Clubs				1			2			2			1						6		
OTHER																								
Counseling				1	2		1	1											2	3	
LD Tutoring					3			1												4	
Deaf Education/Therapy					1						1									2	

TABLE A.4: MULTIPLE COURSEWORK TAKEN BY SECONDARY SPECIAL EDUCATION STUDENTS

COURSES	NUMBER OF STUDENTS			
	Two Special Ed. Classes	Two Regular Ed. Classes	A Special and Regular Class Combination	More Than Two Classes
Remedial Math	19		5	5 1/
Remedial Social Studies	13	3	2	
Remedial English	10	1	3	1 2/
Remedial Science	2	3	1	
Remedial Reading		1	1	
Home Economics		4		
Industrial Arts		2		
Business Skills		2		
Distributive Ed.		1		
Art		1		
Music		1		
P.E.		1		
ROTC		1		
Study Hall		4	1	1 3/

1/One student had 4 periods of special education Math listed on his class schedule; two pupils had 3 periods of special education Math listed; and the remaining two students were scheduled for 2 periods of Math provided by special education plus 1 period of regular education Math.

2/One student had 3 periods of special education English on his class schedule.

3/One student had 4 periods of regular study hall on her schedule.

TABLE A.5: COURSE ENROLLMENT OF SPECIAL EDUCATION STUDENTS

COURSES	SPECIAL EDUCATION ENROLLMENT (N=458)		
	Regular	Special	Vocational
ACADEMIC			
Accelerated Courses			
English	2		
Math			
Science	1		
Social Studies			
Foreign Language			
Regular/Average			
English	5		
Math	23		
Science	17		
Social Studies	32		
Foreign Language	4		
Remedial/Basic			
English	48	315	
Math	67	233	
Science	45	124	
Social Studies	42	161	
Foreign Language (ESL)	3		
Reading	31	32	

TABLE A.5: Continued

COURSES	SPECIAL EDUCATION ENROLLMENT (N=458)		
	Regular	Special	Vocational
NON-ACADEMIC			
Art	57	6	
Music	25		
Physical Education	217	15	
Driver's Education	13	5	
Health	62	26	
Home Economics	68	20	
Business Skills	29		
Industrial Arts	52		
Study Hall	83	10	
ROTC	25		
Drama	6		
Teacher Aide	5	7	
Other (e.g., Photo., A.V.)	11	16	
CAREER/VOCATIONAL			
Prevocational/Orientation		42	1
Regular Coursework	1		67
Special Coursework			42
Work Experience	4	99	5
EXTRACURRICULAR			
Sports	16	8	
Clubs	6		
OTHER			
Counseling	2	3	
LD Tutoring		4	
Deaf Education/Therapy		2	

TABLE A.6: AMOUNT OF TIME SPENT IN SPECIAL WORK EXPERIENCE PROGRAMS BY SPECIAL EDUCATION STUDENTS

Class Periods of Special Work Experience	Number of Students Participating 1/
6 periods (not in school at all)	28
5 periods	3
4 periods	7
3 periods	28
2 periods	7
1 period	26
TOTAL	99

1/In one school, the schedules of special education students participating in work experience were kept by the area special education coordinator and therefore could not be reviewed. These students (estimated to be about 5) are not included in the counts. Also not included in these figures are students enrolled in regular or special vocational courses which may have a practical work component as part of the class.